WHAT IS CLAIMED IS:

1. An OFDM transmit signal receiver comprising:

a demodulation circuit configured to receive an OFDM transmit signal containing an information carrier, an additive-information transmission carrier, and a reception-synchronization pilot signal to convert said information carrier, said additive-information transmission carrier, and said reception-synchronization pilot signal into frequency-axial data, said information carrier transmitting information data, said additive-information transmission carrier having a lower multi-valued modulation degree than said information carrier, and said reception-synchronization pilot signal having a lower multi-valued modulation degree than said information carrier;

a differential detection circuit configured to conduct detection using a detection-subject symbol of a plurality of symbols indicated at a predetermined interval in the same frequency range and using a symbol ahead said detection-subject symbol by a predetermined time in at least either one output of said additive information transmission carrier and said reception-synchronization pilot signal output from said demodulation circuit; and

a first S/N ratio generation circuit configured to generate an S/N ratio based on a detection output provided from said differential detection circuit, said

S/N ratio indicating a reception quality of said OFDM transmit signal.

2. The OFDM transmit signal receiver according to claim 1, wherein said demodulation circuit comprises a quadrature detection circuit configured to detect said OFDM transmit signal in an orthogonal manner and a fast fourier transfer circuit conducting fast fourier transform operations to convert time-axial data of a signal output from said quadrature detection circuit into frequency-axial data.

3. The OFDM transmit signal receiver according to claim 1, further comprising:

an equalization circuit configured to demodulate and to equalize said information carrier output from said demodulation circuit;

a second S/N ratio generation circuit configured to generate an S/N ratio based on an equalization output provided from said equalization circuit, said S/N ratio indicating a reception quality of said OFDM transmit signal; and

a selection circuit configured to select either one of said S/N ratio output from said first S/N ratio generation circuit and said S/N ratio output from said second S/N ratio generation circuit based on said S/N ratio output from said second S/N ratio generation circuit.

4. The OFDM transmit signal receiver according to

claim 1, further comprising:

an equalization circuit configured to demodulate and to equalize said information carrier output from said demodulation circuit;

a second S/N ratio generation circuit configured to generate an S/N ratio based on an equalization output provided from said equalization circuit, said S/N ratio indicating a reception quality of said OFDM transmit signal; and

a synthesis circuit configured to synthesize said S/N ratio output from said first S/N ratio generation circuit and said S/N ratio output from said second S/N ratio generation circuit in accordance with said S/N ratio output from said second S/N ratio generation circuit.

5. The OFDM transmit signal receiver according to claim 1, further comprising:

an equalization circuit configured to demodulate and to equalize said information carrier output from said demodulation circuit;

a carrier interference detection circuit configured to detect carrier interference/non-interference in said information carrier based on an equalization output provided from said equalization circuit; and

a correction circuit configured to conduct correction to reflect a carrier deterioration due to

said carrier interference on said S/N ratio output from said first S/N ratio generation circuit in accordance with an output provided from said carrier interference detection circuit.

6. The OFDM transmit signal receiver according to claim 2, further comprising:

an equalization circuit configured to demodulate and to equalize said information carrier and guessing time-axial and frequency-axial transmission-path responses based on a signal output from said demodulation circuit;

a transmission-path response-fluctuation detection circuit configured to detect frequency-directional and time-directional fluctuations of said transmission-path response by using said transmission-path response guessed at said equalization circuit; and

a correction circuit configured to conduct correction processing, in accordance with such a fluctuation in transmission-path response that is detected by said transmission-path response-fluctuation detection circuit, to reflect a deterioration due to said fluctuation on said S/N ratio output from said first S/N ratio generation circuit.

7. The OFDM transmit signal receiver according to claim 1, wherein said first S/N ratio generation circuit comprises a detection circuit configured to obtain a squared value (I variance value) of

a difference between said detection output I signal and a reference I signal and a squared value (Q variance value) of a difference between said detection output Q signal and a reference Q signal, and an averaging circuit configured to obtain an average by averaging said I and Q variance values in both a frequency direction and a time direction.

8. The OFDM transmit signal receiver according to claim 3, wherein:

said first S/N ratio generation circuit comprises a detection circuit configured to obtain a squared value (I variance value) of a difference between said detection output I signal and a reference I signal and a squared value (Q variance value) of a difference between said detection output Q signal and a reference Q signal, and an averaging circuit configured to obtain an average by averaging said I and Q variance values in both a frequency direction and a time direction; and

said second S/N ratio generation circuit comprises a detection circuit configured to obtain a squared value (I variance value) of a difference between said equalization output I signal and a reference I signal and a squared value (Q variance value) of a difference between said equalization output Q signal and a reference Q signal, and an averaging circuit configured to obtain an average by averaging said I and Q variance values in both a frequency direction and a time

direction.

9. The OFDM transmit signal receiver according to claim 4, wherein:

said first S/N ratio generation circuit comprises a detection circuit configured to obtain a squared value (I variance value) of a difference between said detection output I signal and a reference I signal and a squared value (Q variance value) of a difference between said detection output Q signal and a reference Q signal, and an averaging circuit configured to obtain an average by averaging said I and Q variance values in both a frequency direction and a time direction; and

said second S/N ratio generation circuit comprises a detection circuit configured to obtain a squared value (I variance value) of a difference between said equalization output I signal and a reference I signal and a squared value (Q variance value) of a difference between said equalization output Q signal and a reference Q signal, and an averaging circuit configured to obtain an average by averaging said I and Q variance values in both a frequency direction and a time direction.

10. The OFDM transmit signal receiver according to claim 3, wherein said selection circuit decides whether said S/N ratio output from said second S/N ratio generation circuit is valid or invalid and, if said S/N ratio is decided to be valid, selects said S/N ratio

output from said second S/N ratio generation circuit and, if said S/N ratio is decided to be invalid, selects said S/N ratio output from said first S/N ratio generation circuit.

11. An OFDM transmit signal receiver comprising:

a demodulation circuit configured to receive an OFDM transmit signal containing an information carrier and a pilot signal to convert said information carrier and said pilot signal into frequency-axial data, said information carrier transmitting information data, and said pilot signal being used to guess a transmission-path response;

a differential detection circuit configured to conduct detection processing by using a detection-subject symbol of a plurality of symbols indicated at a predetermined interval in the same frequency range and using a symbol ahead said detection-subject symbol by a predetermined time in said pilot signal output from said demodulation circuit; and

a first S/N ratio generation circuit configured to generate an S/N ratio based on a detection output provided from said differential detection circuit, said S/N ratio indicating a reception quality of said OFDM transmit signal.

12. The OFDM transmit signal receiver according to claim 11, wherein said demodulation circuit comprises a quadrature detection circuit configured to detect

said OFDM transmit signal in an orthogonal manner and a fast fourier transfer circuit configured to conduct fast fourier transform operations to convert time-axial data of a signal output from said quadrature detection circuit into frequency-axial data.

13. The OFDM transmit signal receiver according to claim 11, further comprising:

an equalization circuit configured to demodulate and to equalize said information carrier output from said demodulation circuit;

a second S/N ratio generation circuit configured to generate an S/N ratio based on an equalization output provided from said equalization circuit, said S/N ratio indicating a reception quality of said OFDM transmit signal; and

a selection circuit configured to select either one of said S/N ratio output from said first S/N ratio generation circuit and said S/N ratio output from said second S/N ratio generation circuit in accordance with said S/N ratio output from said second S/N ratio generation circuit.

14. The OFDM transmit signal receiver according to claim 11, further comprising:

an equalization circuit configured to demodulate and to equalize said information carrier output from said demodulation circuit;

a second S/N ratio generation circuit configured

to generate an S/N ratio based on an equalization output provided from said equalization circuit, said S/N ratio indicating a reception quality of said OFDM transmit signal; and

a synthesis circuit configured to synthesize said S/N ratio output from said first S/N ratio generation circuit and said S/N ratio output from said second S/N ratio generation circuit in accordance with said S/N ratio output from said second S/N ratio generation circuit.

15. The OFDM transmit signal receiver according to claim 11, further comprising:

an equalization circuit configured to demodulate and to equalize said information carrier output from said demodulation circuit;

a carrier interference detection circuit configured to detect carrier interference/non-interference in said information carrier based on an equalization output provided from said equalization circuit; and

a correction circuit configured to conduct correction to reflect a carrier deterioration due to said carrier interference on said S/N ratio output from said first S/N ratio generation circuit in accordance with an output provided from said carrier interference detection circuit.

16. The OFDM transmit signal receiver according to

claim 12, further comprising:

an equalization circuit configured to demodulate and to equalize said information carrier and guessing time-axial and frequency-axial transmission-path responses based on a signal output from said demodulation circuit;

a transmission-path response-fluctuation detection circuit configured to detect frequency-directional and time-directional fluctuations of said transmission-path response by using said transmission response guessed by said equalization circuit; and

a correction circuit configured to conduct correction processing, in accordance with such a fluctuation in transmission-path response that is detected by said transmission-path response-fluctuation detection circuit, to reflect a deterioration due to said fluctuation on said S/N ratio output from said first S/N ratio generation circuit.

17. The OFDM transmit signal receiver according to claim 11, wherein said first S/N ratio generation circuit comprises a detection circuit configured to obtain a squared value (I variance value) of a difference between said detection output I signal and a reference I signal and a squared value (Q variance value) of a difference between said detection output Q signal and a reference Q signal, and an averaging circuit configured to obtain an average by averaging

said I and Q variance values in both a frequency direction and a time direction.

18. The OFDM transmit signal receiver according to claim 13, wherein:

said first S/N ratio generation circuit comprises a detection circuit configured to obtain a squared value (I variance value) of a difference between said detection output I signal and a reference I signal and a squared value (Q variance value) of a difference between said detection output Q signal and a reference Q signal, and an averaging circuit configured to obtain an average by averaging said I and Q variance values in both a frequency direction and a time direction; and

said second S/N ratio generation circuit comprises a detection circuit configured to obtain a squared value (I variance value) of a difference between said equalization output I signal and a reference I signal and a squared value (Q variance value) of a difference between said equalization output Q signal and a reference Q signal, and an averaging circuit configured to obtain an average by averaging said I and Q variance values in both a frequency direction and a time direction.

19. The OFDM transmit signal receiver according to claim 14, wherein:

said first S/N ratio generation circuit comprises a detection circuit configured to obtain a squared

value (I variance value) of a difference between said detection output I signal and a reference I signal and a squared value (Q variance value) of a difference between said detection output Q signal and a reference Q signal, and an averaging circuit configured to obtain an average by averaging said I and Q variance values in both a frequency direction and a time direction; and

said second S/N ratio generation circuit comprises a detection circuit configured to obtain a squared value (I variance value) of a difference between said equalization output I signal and a reference I signal and a squared value (Q variance value) of a difference between said equalization output Q signal and a reference Q signal, and an averaging circuit configured to obtain an average by averaging said I and Q variance values in both a frequency direction and a time direction.

20. The OFDM transmit signal receiver according to claim 13, wherein said selection circuit decides whether said S/N ratio output from said second S/N ratio generation circuit is valid or invalid and, if said S/N ratio is decided to be valid, selects said S/N ratio output from said second S/N ratio generation circuit and, if said S/N ratio is decided to be invalid, selects said S/N ratio output from said first S/N ratio generation circuit.